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ABSTRACT

The improvement of teaching characteristics and teacher behavior are important issues when discussing reading programs. Therefore, the following six major questions and conclusions about the effective reading teacher comprise the emphasis of this discussion. (1) What criteria can be used to measure teacher effectiveness? The main criterion used is pupil gain on standardized tests. (2) Can observers really distinguish degrees of teaching competence in reading instruction? Supervisors' evaluations of teaching effectiveness do not correlate well enough with pupil gain to be substituted for objective measurement. (3) What forms of motivation or class management produce superior results? The relationship between a teacher's motivational style and pupil learning is not distinct, as criticism and praise by teachers draw varying results. (4) What forms of cognitive teacher behavior are related to good achievement? Preliminary findings favor frequent verbal interchanges between teacher and pupil and the balanced use of several types of questions. (5) How can the beginning teacher be helped to develop teaching skills? There are such promising new developments in preservice teacher training as microteaching and programed tutoring. (6) How can the experienced teacher keep his interest and enthusiasm high? Superior leadership which involves teachers in planning and encourages them to try out ideas is important. References are included. (NH)

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THE EFFECTIVE TEACHER OF READING

by

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THE EFFECTIVE TEACHER OF READING

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In our attempts to improve reading instruction we have had hundreds of studies of the characteristics of pupils, and scores of studies in which instructional programs and materials have been compared, but there have been surprisingly few studies of the teacher's contribution--of the teacher characteristics that make for successful learning, or of specific forms of teacher behavior that are associated with good and poor pupil learning in the reading program.

Most of you know about the cooperative studies of primary grade reading which began with 27 federally-assisted first-grade projects in 1964-65. Half of those projects continued through second grade, and six followed their pupils through third grade. The International Reading Association has devoted much attention to those studies in its recent conventions and publications. Individual project summaries have appeared in The Reading Teacher, and the lengthy reports from the Coordinating Center have been published in the Reading Research Quarterly. These studies, taken together, form the largest-scale comparative investigation of beginning reading instruction yet made.

One of the most important conclusions of the Coordinating Center's first-grade report was stated as follows:

> (9) Future research might well center on teacher and learning situation characteristics rather than method and materials. The tremendous range among classrooms within any method points out the importance of elements in the learning situation over and above the methods employed. To improve reading instruction it is necessary to train better teachers of reading rather than to expect a panacea in the form of materials. (3, p. 211)

There are those who have discarded the notion that teacher effectiveness can be greatly improved through better teacher training and supervision. Their solution is to explore educational patterns in which the goal is to produce equipment that will teach in a way that is invulnerable to teacher incompetence or inefficiency. In other words, they want teacher-proof education.

Computer-assisted instruction, now in its infancy, promotes a close relationship between the pupil and the machine from which the teacher is totally excluded, or is obliged to play a comparatively minor role (1, 2). Closely related to this is individually prescribed instruction, in which a computer gives tests, marks them, analyzes error patterns, and determines what learning program should next be given to each pupil (7, 8). In the early days of programmed instruction it was frequently stated that good programs would not displace the teacher, but change the teacher's role to one with more emphasis on diagnosis of learner needs, and guidance. Computer experts are now hard at work devising ways in which computers can assume these functions also. When, or if, the computer takes over as both diagnostician and instructor, human teachers may have little left to do. Thus the teacher shortage may eventually be solved by automation.

Meanwhile, for at least the next decade or two (and, I suspect, for much longer than that), nearly all children will be taught to read wholly or mainly in classrooms by human teachers. Research has shown that teachers in the same community, using the same reading materials and supposedly the same methodology with similar pupils, can come out with widely varying class results. For those who believe that we cannot afford to wait for automated education, as well as for those who believe that dehumanization is a major danger in current society, the improvement of human teaching is an urgent and important issue.

There are six main questions about the effective teacher of reading which deserve our attention. These are, at any rate, the questions discussed below.

1. What criteria can we use to measure teacher effectiveness?

Studies have shown that ratings by principals, or by fellow teachers, do not correspond at all closely to the teacher's success as measured by pupil growth in reading skill. Most research workers on teacher effectiveness have decided to use the hard-boiled criterion that a superior teacher of reading is one whose pupils show above average growth on standardized reading tests. Equivalent forms are given periodically, and the statistical technique called covariance is used to remove or minimize the effects of differences among classes in intelligence and previous learning (12). While this is a rather narrow measure of a teacher's results, it has the merit of being objectively measurable. Furthermore, it is hard to argue that a teacher whose pupils show little or no growth in reading skill is a good teacher of reading, even if her pupils adore her and the principal thinks highly of her. Growth in measured reading skill is not a complete criterion of teacher effectiveness, but it is a minimum essential.

2. Can we really distinguish degrees of competence in teaching reading?

Those of us who have been sure of our ability to observe a teacher for a period or two and rate his excellence as a reading teacher with some precision get no support from the research on this topic. In the cooperative first-grade studies the correlations between supervisor ratings of overall teacher effectiveness and class averages on reading tests ranged from .10 to .22; hardly better than zero (3, p. 206).

On the other hand, some general characteristics of good teaching are distinguishable. When the five cooperative projects with the best results were compared to the five projects with the poorest results, the high-achieving projects had much higher percentages of teachers who were given good ratings in class organization and structure, class participation, awareness of and attention to individual needs, and overall competence (3, p. 195). But within each project the supervisors were not very successful in distinguishing the superior from the inferior teachers.

One may guess that this lack of correlation between supervisor ratings of the teacher and average pupil achievement has several components. Some teachers may put on an excellent show while being observed, but slide back into easier ways when the observer leaves. The criterion, growth on standardized tests, may be too narrow. But still it seems probable that supervisors in general may have partially inaccurate conceptions of what constitutes superior teaching.

3. What forms of motivation or class management produce superior results?

Before discussing some of the recent research on the relation between teachers' motivational practices and reading achievement, it should be noted that all of this research involves the teacher interacting with a group of pupils. None of this research has involved completely individualized instruction and therefore the conclusions do not necessarily apply to individualized reading activities. Furthermore, periods in which pupils are working by themselves, as in silent reading, are not included. Since only part of the total reading program is covered, very high correlations with reading scores should not be expected.

Much of my information on this topic comes from a pre-publication copy of a long review of research by Professor Barak Rosenshine of Temple University, which he has graciously allowed me to use (12). In that paper he analyzes in detail 21 recent studies in which what teachers did was recorded, either by live observers sitting in the rear of the classroom or on TV tape, and later analyzed. Most of the studies used either a Flanders interaction analysis or an Observational Scale and Rating (abbreviated OScAR) of the Medley and Mitzel type. Both of these procedures have fairly elaborate classifications of kinds of verbal statements that teachers make to pupils, and the observer merely makes tally marks in the squares corresponding to the observed behaviors. Thus, use of judgment is reduced to a minimum.

The effect of teacher criticism of pupils has been found to vary with the type of criticism. Mild criticism is not related to poor achievement. On the other hand, strong criticism has significant negative relationships with achievement. To put it differently, teachers should not hesitate to tell a pupil that he made a mistake, to correct him, or to give him direction. But use of shaming, sarcasm, and other forms of strong criticism is harmful to learning.

The frequency of use of praise has not been found to be related to pupil achievement in general. However, the kind of praise used makes a difference. A study in first and third grades found that "minimal reinforcement" through use of such comments as "uh huh," "right," and "okay," was positively related to some achievement scores, while frequent use of stronger praise was not (16). There are indications that praise is more effective when a reason for it is given, such as praising pupil planning or pupil interpretation of ideas. Accepting a pupil's idea and using it by restating it, applying it, comparing it to another idea, or using it in a summary tends to be a characteristic of teachers whose classes achieve well.

In the CRAFT Project (the three-year cooperative reading project which I directed) we found striking differences between the skills-centered and language-experience approaches in the results of positive motivation (praise) and negative motivation (criticism). (9, 10) In the first grade language-experience classes, positive motivation tended to go with good achievement and negative motivation with poor achievement. In the first grade skills-centered classes, which used basal readers with or without supplementary phonics, none of the correlations between motivation and achievement was significant (10). In the second grade, positive motivation was associated with good achievement in the language-experience classes and with poor achievement in the skills-centered classes. Negative motivation was strongly associated with poor achievement in both skills-centered methods and one of the two language-experience methods (9). Thus there seems to be some relationship between teaching methodology and the motivational style that works best. In all four methods, in both first and second grade, high control scores (indicating frequent verbal statements intended to control pupil behavior) were associated with poor achievement.

The picture emerges that in first and second grade, the teacher whose pupils behave themselves without frequent reminders tends to obtain better achievement than the teacher who has to interrupt the lesson frequently in order to restore discipline. Teachers using language-experience methodology generally obtained good results with praise and poor results with criticism. Teachers using basal readers also got poor results with frequent, strong criticism. They tended to get better results

when they avoided frequent use of either strong praise or strong criticism, particularly in second grade. Apparently, a matter-of-fact concentration on reading as such was more effective for the skills-centered teachers than a more emotional style of teaching.

An interesting sidelight is the finding in one study that use of a "warm" voice is negatively related to achievement (15). If my interpretation is correct, many children of school age resent the kind of sugary manner that seems appropriate with babies, and prefer to be treated in a more grown-up fashion.

4. What forms of cognitive teacher behavior are related to good achievement?

As yet there is much less data on the effectiveness of such cognitive aspects of teaching as the ability to explain new material, lecture versus discussion, and the use of different kinds of questions, than on the motivational side of teaching. It has been very difficult to develop a satisfactory coding system into which teacher statements and questions can be categorized.

One of the simplest cognitive measures is the number of verbal interchanges between teacher and pupils in a given period of time. In a typical interchange, the teacher says something or asks a question, a pupil responds, and the teacher reacts to the pupil statement. A high interchange rate suggests a lively discussion or recitation; a low rate suggests a monologue or lecture. In general, high interchange rates tend to be associated with good achievement (12). In the CRAFT Project this was stronger in first grade than in second grade; probably the greater importance of silent reading in second grade is the reason for this difference.

Several studies in the elementary grades have classified the kinds of questions and statements used by teachers, but none of these has yet turned up a difference that is significantly related to achievement (12). This is a puzzling area. There are suggestions in the research that teachers who use a balanced variety of kinds of questions may get better results than those who tend to favor questions of one kind, whether that calls for facts or interpretations, a specific answer or a variety of acceptable responses. Some of the kinds of teacher statements that have been classified include highlighting the difference between concepts, pointing out salient features, providing the correct label, and relating the material to some aspect of children's lives. High-achieving teachers in the middle

grades were found in one study to follow a pattern in which they usually spoke for less than half a minute, providing information or posing a situation; then asked a question; a pupil or pupils responded; and the teacher sometimes commented on the response (14). A lesson consisting of many such sequences apparently is more helpful than a straight lecture on the one hand, or a recitation in which question follows question with little or no explanation or clarification by the teacher. One may also see some resemblance between such a lesson and the typical pattern of programmed instruction which may be described as a sequence of units, each of which contains a small bit of information or instruction, a question, an answer, and correction.

This is, according to Rosenshine, about as far as research on teacher effectiveness has gone in analyzing the cognitive structure of lessons and determining which cognitive patterns are most effective (12). Obviously only a beginning has been made.

5. How can the beginning teacher be helped to develop teaching skill?

In preservice education, student teaching has for many years been regarded as a most important part of preparation for teaching. Yet much dissatisfaction has been expressed, with both the cooperating teacher in the school and the critic-teacher sent by the college coming in for a share of the criticism. It has been asserted that student teachers imitate the bad that they observe along with the good, and that occasional visits by a college supervisor make little impression on future teaching behavior.

A few years ago a study was made at Hunter College of the effects of recording lessons taught by student teachers on TV tape and allowing the student teacher to study and criticize her own performance in privacy (13). For each student teacher a lesson taught near the beginning of the student teaching course was compared with another lesson recorded near the end of the course. The students who had the opportunity to react to their own recorded teaching in privacy made somewhat more progress in teaching skill than the group who received conventional supervisory visits and conferences. Here the importance of feedback is once again demonstrated. Self-improvement is often difficult because one cannot observe one's own performance the way another person can. Watching and hearing one's teaching

on a TV screen gives the student teacher an observer's view, and privacy removes the need for self-protective defensiveness that sometimes prevents a beginning teacher from accepting and constructively using the comments and suggestions made by a supervisor.

Another recent development in teacher training is micro-teaching. The idea of micro-teaching is to focus on very short teaching units, usually three to five minutes in duration and each focussed on specified content. Students observe and discuss recorded micro-lessons. They also have opportunities to teach micro-lessons, and to take part in the critical analysis of their own and one another's performances.

At the annual convention of the American Educational Research Association in February, 1969, several papers on micro-teaching were presented. In one study, students in a first methods course each taught four micro-lessons and received feedback from the pupils taught, from the course instructor, and from listening to the recorded lesson. Students having this kind of training improved more in 18 out of 22 variables than students taking the same course without the micro-teaching experience (4). Another study reported successful use of micro-teaching in learning how to deal with undesirable classroom behavior (17). In a third paper, students trained with micro-teaching were followed up in the intern year and were found to have acquired a greater number of specific teacher behaviors and teaching patterns than interns without a micro-teaching background (18). Micro-teaching seems to have much to offer as a means of improving the effectiveness of preservice training.

A third promising development is programmed tutoring, a procedure developed by Ellson and his associates at Indiana University (5, 6). In programmed tutoring extremely specific directions are provided in printed form which tell the tutor what to do step by step. Principles of programmed instruction are followed. If a child gets a learning unit correct, he is given praise and goes on to the next unit. Each item on which an error is made is retaught until learned, using a variety of prompts which are to be used in a specified sequence. Each child is taught individually and progresses at his own rate. The teaching procedure has been successfully taught to and used by female high school graduates with no prior training in teaching. Ellson's most recent report indicates that slow learners in the first grade who were given two 15-minute sessions of programmed tutoring a day made substantially greater progress in reading than other comparison groups (6).

This technique would seem to have exciting possibilities for use as a laboratory experience to accompany undergraduate courses in educational psychology or elementary school methods. Students would have vivid first-hand experience in adjusting the pace and content of instruction to an individual learner. Learning how to adjust the instructional pace to insure that one child succeeds may prove to be a highly desirable introduction to the much more difficult task of controlling the pace of group instruction and insuring learning by all members of the group.

These three new developments--self-analysis of one's own recorded teaching, micro-teaching, and programmed tutoring--provide hopeful signs that it may be possible to increase substantially the effectiveness of preservice training in the teaching of reading.

6. How can the experienced teacher keep his interest and enthusiasm high?

In a profession in which so many new entrants become dropouts from teaching within their first three years of service, maintaining the interest and improving the morale of those who do continue to teach is a most important objective.

One of the most powerful influences on teacher morale and effectiveness is the quality of administrative and supervisory leadership. In Joyce Morris's six-year study of reading in England, the main comparison between beginning whole-word and phonic methods came out inconclusively, as there were no significant differences in reading attainment between the two beginning methods in the years corresponding to our third to sixth grades (11, p. 328). Morris attributed major importance to the quality of teaching and particularly to the leadership provided by the "head" or principal:

> Thus, after the attributes of their populations and material conditions had been considered, each school's success or failure in promoting good reading standards and/or progress seemed to depend primarily on the quality of its head and secondarily on that of its staff. As the 'improver' schools so clearly showed, initial handicaps can be overcome if teachers are sufficiently determined never to accept defeat. (11, p. 72)

Support for the importance of leadership also comes from the cooperative first-grade studies. One of the conclusions of the Coordinating Center's report reads as follows:

> (7) Reading achievement is related to characteristics in addition to those investigated in this study. Pupils in certain school systems become better readers than pupils in other school systems when pupil characteristics are controlled statistically. Furthermore, these differences in achievement from project to project do not seem to be directly related to the class, school, teacher, and community characteristics appraised in this study (3, p. 211).

It does not take a great leap of the imagination to guess that quality of educational leadership was one of the major factors, if not the major factor, in the unmeasured characteristics that influenced the reading attainment in a project. As the director of one of the cooperative projects I became convinced quite early that the school principal was a key person in influencing the morale of the teachers in the project, and, indirectly, project achievement.

Within the limits of this paper it is not possible to do more than to point out the importance of the superintendent, the principal, and the reading supervisor or consultant for staff morale, and to consider two related points.

One of these is the significance of involving teachers in planning and evaluative activities. Schools in which teachers are active on committees which have an important voice in the selection of reading materials and determining the reading curriculum, and in other ways play a creative professional role, tend to have much higher morale than schools in which most teachers feel like faceless cogs in an impersonal machine.

The other point is the importance of Hawthorne Effect, the well-known novelty effect that gives almost any innovation in method or material a temporary advantage, particularly in an experimental or evaluative study. It is worth considering whether a kind of permanent Hawthorne Effect could be produced by creating a school climate in which teachers are encouraged always to try to find a new and improved way. An on-going cycle of tryout, testing, and comparison could be set up, each time trying to see if last year's results can be bettered. Not all teachers would take kindly to this ever-renewing excitement; but those who would remain and like it would almost certainly become very superior teachers.

Summary and Conclusions

In a presentation of this length it is impossible to give thorough coverage to all aspects of the teacher's effectiveness in reading instruction.

Unless we are willing to make the teacher merely an assistant to teaching machines, the improvement of teaching must be a major element in educational improvement. Recent research has amply demonstrated that differences among teachers are far more important than differences among methods and materials in influencing the reading achievement of children.

The main criterion used in research on teacher effectiveness is pupil gain on standardized tests. While narrow and not comprehensive, this provides an objective minimal essential. Ratings by supervisors do not correlate well enough with pupil improvement to be substituted for objective measurement.

The relationship between the motivational style of the teacher and pupil learning is not simple. Harsh criticism interferes with learning, but mild criticism and correction does not. Amount of praise is related to good achievement in some teaching methods but not in others. A matter-of-fact attitude and quiet voice seem to be more successful in many classrooms than a highly emotional or sugary manner.

Research on the cognitive structure of teaching is still struggling with complicated coding and classifying problems. Preliminary findings favor frequent verbal interchanges between teacher and pupils and the balanced use of several types of questions.

Promising new developments in preservice teacher training include self-criticism of recorded lessons, micro-teaching, and programmed tutoring.

Finally, experienced teachers can be kept interested and even enthusiastic when they have superior leadership. One characteristic of such leadership is resourcefulness in involving teachers in responsible professional decision-making. Another is the encouragement of teachers to try out new and possibly improved ideas, and to evaluate the results. The teacher who is continually engaged in comparing the new with the old remains young in heart and mind, regardless of age.

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